

IN THE CLAIMS

1. (Previously Presented) A wireless router for a wireless communications network, comprising:

a first interface operable to communicate radio frames for a call with a mobile device, the first interface operable to generate a label for each radio frames received from the mobile device;

a second interface operable to communicate wireline packets for the call with a wireline network, the second interface operable to generate a label for each wireline packet received from the wireline network;

a traffic controller operable to convert wireline packets received for the call from the wireline network to radio frames, to route the radio frames to the mobile device through the first interface, to convert radio frames received for the call from the mobile device to wireline packets, to route the wireline packets to the wireline network through the second interface, and to communicate with at least one secondary wireless router, wherein the traffic controller is further operable to communicate with wireline packets and radio frames with at least one secondary wireless router for soft handoff of the call and to communicate with a public switched telephone network (PSTN) gateway through the wireline network; and

a virtual path generator operable to configure wireless virtual paths for the call in the wireline network to the at least one secondary wireless router for soft handoff processing for the call to the at least one secondary wireless router, wherein the virtual paths are multi-protocol label switched path (MPLS), the traffic controller operable to route wireline packets and radio frames to the at least one secondary wireless router over the wireless virtual paths in

accordance with the labels associated with the wireline packets and the radio frames.

2. (Previously Presented) The wireless router of Claim 1, wherein the radio frames and associated labels are placed into Internet Protocol (IP) packets for transport over the wireless virtual paths to the at least one secondary wireless router.

3. (Previously Presented) The wireless router of Claim 1, wherein the wireless router is operable to be directly connected to a wireline IP router, the traffic controller further operable to route wireline packets through the second interface directly to the wireline IP router.

4. (Previously Presented) The wireless router of Claim 1, wherein the traffic controller is a technology independent wireless traffic processor.

5. (Previously Presented) The wireless router of Claim 1, wherein the call is a first call and the mobile device is a first mobile device, further comprising:

the first interface operable to communicate radio frames for the first call with the first mobile device using a first access technology and to communicate radio frames for a second call with a second mobile device using a second access technology; and

the traffic controller operable to convert wireline packets received for the second call from the wireline network to radio frames for the second access technology, to route the radio frames to the second mobile device through the second interface, to convert radio frames received from the second mobile device to wireline packets, and to route the wireline packets to the wireline network through the second interface.

6. (Canceled).

7. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to communicate with the at least one secondary wireless router through the wireline network for the soft handoff of the call.

8. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to communicate with the at least one secondary wireless router through the wireline network for micromobility of the call.

9. (Canceled).

10. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to communicate with a call agent through the wireline network.

11. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to communicate with a media gateway through the wireline network.

12. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to communicate with a policy manager through the wireline network.

13. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to communicate with an authentication, authorization, and accounting (AAA) server through the wireline network.

14. (Previously Presented) The wireless router of Claim 1, the traffic controller operable to communicate with disparate radio access networks through the wireline network.

15. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to classify wireline packets and radio frames for the call.

16. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to provide security for the call.

17. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to reserve radio frequency (RF) resources for the call.

18. (Previously Presented) The wireless router of Claim 1, the traffic controller further operable to perform quality of service (QoS) management for the call.

19. (Previously Presented) The wireless router of Claim 1, the first interface, second interface, and traffic controller each further comprising software stored on a computer-readable medium.

20. (Canceled).

21. (Previously Presented) The wireless router of Claim 1, the traffic controller including a selector operable to receive a first instance of a particular radio frame from the mobile device, to receive a second instance of the particular radio frame from the second router, and to select one of the first and second instances for transmission to a destination device for the call.

22. (Previously Presented) The wireless router of Claim 1, the traffic controller including a distributor operable to receive wireline packets from the wireline network destined for the mobile device, to transmit a first instance of a particular wireline packet to the mobile device, and to transmit a second instance of the particular wireline packet to the at least one secondary wireless router for transmission to the mobile device.

23. (Canceled).

24. (Previously Presented) The wireless router of Claim 1, the first interface operable to communicate radio frame traffic for the call with the mobile device.

25. (Previously Presented) The wireless router of Claim 1, the second interface operable to communicate IP traffic for the call with the wireline network.

26. (Previously Presented) The wireless router of Claim 1, the first interface, the second interface, virtual path generator, and traffic controller each comprising software stored on a computer-readable medium.

27. (Previously Presented) The wireless router of Claim 1, the first interface, second interface, virtual path generator, and traffic processor each comprising at least one of software stored on a computer-readable medium and hardware encoded with predefined instructions.

28. (Previously Presented) The wireless router of Claim 21, the selector further operable to synchronize the first and second instances , to compare the first and second instances of the wireless traffic, and to select one of the first and second instances based on the comparison.

29. (Previously Presented) The wireless router of Claim 22, the distributor further operable to transmit the second instance to the at least one secondary wireless router with a synchronization bias for synchronous transmission of the second instance with the first instance to the mobile device.

30. (Previously Presented) The wireless router of Claim 1, further comprising a path generator operable to configure an Internet protocol (IP) flow in the wireline network to the at least one secondary wireless router for soft handoff processing for the call.

31. (Currently Amended) A wireless communications network, comprising:

- a first wireless router;
- a second wireless router;

a first wireless virtual path configured for a call between the first and second routers for transmission of wireline protocol traffic; and

a second wireless virtual path configured for the call between the first and second routers for transmission of wireless protocol traffic, the first and second wireless virtual paths each comprising a multi-protocol label switched path (MLPS), the wireline protocol traffic and the wireless protocol traffic including labels generated upon receipt of the wireline protocol traffic and the wireless protocol traffic for routing over the first and second wireless virtual paths to facilitate soft handoff of a call, wherein the wireline protocol traffic comprises Internet protocol (IP) traffic and the wireless protocol traffic comprises radio frames.

32. (Canceled).

33. (Canceled).

34. (Previously Presented) The wireless communications network of Claim 31, the first and second wireless routers operable to intercommunicate over the second wireless virtual path to provide a soft handoff for a call.

35. (Previously Presented) The wireless communications network of Claim 31, the first and second wireless routers operable to intercommunicate to allocate bandwidth for a call.

36. (Previously Presented) The wireless communications network of Claim 31, the first and second wireless routers operable to intercommunicate to reserve resources for a call.

37. (Previously Presented) The wireless communications network of Claim 31, the first and second wireless routers operable to intercommunicate to provide mobility management for a call.

38. (Previously Presented) The wireless communications network of Claim 31, further comprising:

a set of active wireless routers for a call, the set including the first and second routers; and

the set of routers operable to intercommunicate over wireless virtual paths to provide a plurality of call mobility, soft handoff, and resource management for the call.

39. (Canceled).



40. (Canceled).

41. (Canceled).

42. (Canceled).

43. (Canceled).

44. (Previously Presented) A wireless communications network, comprising:

a plurality of wireless routers; and

the plurality of wireless routers each operable to receive traffic from a mobile device, to route the traffic directly to an Internet protocol (IP) wireline network, and to intercommunicate, wherein the routers are further operable to intercommunicate to provide a soft handoff for a call including the mobile device using a multi-protocol label switch (MPLS) protocol, wherein one of the plurality of wireless routers is established as the primary router, the primary router operable to establish MPLS wireless virtual paths for the call with one or more secondary routers of the plurality of wireless routers identified as being active within the wireless communications network, the primary router operable to route the traffic to the one or more secondary routers over the MPLS wireless virtual paths according to labels assigned to the traffic upon being received from the mobile device to facilitate soft handoff of the call to the one or more secondary routers upon a determination by the primary router that it is no longer able to process the call.

45. (Previously Presented) The wireless communications network of Claim 44, the plurality of wireless routers further operable to intercommunicate to reserve resources for a call including the mobile device.

46. (Previously Presented) The wireless communications network of Claim 44, the plurality of wireless routers further operable to intercommunicate to allocate bandwidth to a call including the mobile device.

47. (Canceled).

48. (Previously Presented) The wireless communications network of Claim 44, the plurality of wireless routers further operable to intercommunicate to provide call mobility for a call including the mobile device.

49. (Previously Presented) The wireless communications network of Claim 44, the plurality of wireless routers further operable to intercommunicate to establish a call for the mobile device.

50. (Canceled).

51. (Canceled).

52. (Canceled).

53. (Canceled).

54. (Canceled).

55. (Canceled) .

56. (Canceled) .

57. (Canceled) .

58. (Canceled) .

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61. (Canceled) .

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67. (Canceled) .

68. (Canceled) .

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70. (Canceled) .

71. (Canceled).

72. (Canceled).

73. (Canceled).

74. (Canceled).

75. (Canceled).

76. (Canceled).

Please cancel Claims 33, 39, 41-43, 50, 52-60, 62-67, 69-72, and 76 as indicated above without prejudice or disclaimer.